

SPOOL-TYPE HYDRAULIC DIRECTIONAL CONTROL VALVE HAVING REDUCED CAVITATION

Abstract of the Disclosure

A spool-type hydraulic directional control valve having improvements to reduce cavitation when the spool is in the float position. The flow area of a first passageway on the valve spool is appropriately sized to reduce the flow hydraulic fluid flow from the head end of the hydraulic cylinder to the hydraulic fluid reservoir, such that a sufficient proportion of that hydraulic fluid instead flows internally through control valve and back to the rod end of the hydraulic cylinder to reduce cavitation when the valve spool is in the "float" position. Additionally, a second passageway on the valve spool may be blocked-off, eliminating the hydraulic fluid flow path from the hydraulic fluid reservoir to the rod end of the hydraulic cylinder when the valve spool is in the "float" position.